

Recommendations of the EPSDT Screening Guidelines Committee

April, 2004

HEARING SCREENINGS:

- Hearing screenings performed as recommended by AAP periodicity guidelines and using acceptable methods will meet requirements for EPSDT screens.
- The goal of universal newborn hearing screening (UNHS) is to have all infants have access to hearing screening using a physiologic measure. Newborns who receive routine care have access to hearing screening during their hospital admission. Newborns in alternative birthing facilities, including home births, have access to and are referred for screening before 1 month of age. All newborns or infants who require neonatal intensive care receive hearing screening before discharge from the hospital. The components constitute UNHS.
- The goal of newborn screening is to also have all infants screened prior to discharge from hospital after birth or prior to one month; prior to 3 months refer all infants that did not pass the screen for diagnostic assessment (medical and audiological, if indicated); implement early intervention services prior to six months.
- Infants who did not pass screening should be referred for diagnostic assessment of hearing. A prompt re-screening might be substituted for immediate referral for diagnostic assessment if the clinician believes the initial screening result is likely to be false positive. Re-screening should be done within 2-4 weeks rather than waiting until the next scheduled well—child visit.
- Newborn hearing screenings are most likely to occur in hospital with results reported to the primary care provider. Acceptable methods of screening include physiologic audiological screening such as auditory brainstem response (ABR) and otoacoustic emissions (OAE) with thresholds of 30 dB HL.
- Acceptable methods of objective hearing screening include: physiologic audiological screening for newborns, such as ABR or OAE, conventional audiometry, hand-held audiometry, conditioned play audiometry (with a screening level of 20 dB HL at 500, 1000, 2000, and 4000 Hz).
- Positive screening results should lead to referral for diagnostic assessment of hearing. A prompt re-screening may be substituted for immediate referral for diagnostic assessment if the clinician believes the initial screening result is likely to be a false positive. Re-screening should be done within 2-4 weeks rather than waiting until the next scheduled well child visit.
- If there are parental concerns about hearing, at any age, then an objective screening test or diagnostic should be performed.
- Children newly entering the program (i.e. new to a practice, without medical documentation) should be brought up to date on all screening criteria.
- Physiological screening may be acceptable for older children and children who are not cooperative with conventional means (i.e. hand-held audiometry, conventional audiometry).

- Interperiodic screenings may also be conducted between recommended testing intervals.
- Progressive hearing loss may be associated with different risk factors. Please refer to references after guidelines for articles, resources that enumerate the risk indicators for progressive or late –onset hearing loss.

	Recommendations for Hearing Screening	
	<i>Subjective</i>	<i>Objective</i>
Newborn	<ul style="list-style-type: none"> • Parental concern • Family history 	<ul style="list-style-type: none"> • ABR or OAE, if not performed in hospital
By 1 month	<ul style="list-style-type: none"> • Parental concern 	<ul style="list-style-type: none"> • Ear exam • If infant does not pass the hearing screen in the hospital , provide a medical evaluation and re-screen by one month or perform diagnostic testing as soon as possible prior to three months of age.
2 months	<ul style="list-style-type: none"> • Parental concern • Family history (unless previously recorded) • Response to voice and noise - parent report 	<ul style="list-style-type: none"> • Ear exam • Confirmatory pediatric audiologic diagnostic evaluation of abnormal screening result should be completed prior to 3 months of age.

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4 months	<ul style="list-style-type: none"> • Parental concern • Recognizes parent's voice - parent report • Family history (unless previously recorded) 	<ul style="list-style-type: none"> • Ear exam • Infants with a confirmed hearing loss should begin audiological intervention and other early intervention services prior to six months.
6 months	<ul style="list-style-type: none"> • Parental concern • Turns to sounds - parental report • Family history (unless previously recorded) 	<ul style="list-style-type: none"> • Ear exam • Infants with a confirmed hearing loss should begin audiological intervention and other early intervention services prior to six months.
9 months	<ul style="list-style-type: none"> • Parental concern • Response to voice and noise - parent report • Family history (unless previously recorded) 	<ul style="list-style-type: none"> • Ear exam
12 months	<ul style="list-style-type: none"> • Parental concern • Response to voice and noise - parent report • Family history (unless previously recorded) 	<ul style="list-style-type: none"> • Ear exam

	recorded)	
15 months	<ul style="list-style-type: none"> • Parental concern • Response to voice and noise - parent report • Family history (unless previously recorded) 	<ul style="list-style-type: none"> • Ear exam
18 months	<ul style="list-style-type: none"> • Parental concern • Response to voice and noise - parent report • Family history (unless previously recorded) 	<ul style="list-style-type: none"> • Ear exam
24 months	<ul style="list-style-type: none"> • Parental concern • Response to voice and noise - parent report • Family history (unless previously recorded) 	<ul style="list-style-type: none"> • Ear exam
3 years	<ul style="list-style-type: none"> • Parental concern 	<ul style="list-style-type: none"> • Ear exam • Hearing screen if child is cooperative.
4 years	<ul style="list-style-type: none"> • Parental concern 	<ul style="list-style-type: none"> • Ear exam • Hearing screen (if not done at 3 years)
5 years	<ul style="list-style-type: none"> • Parental concern 	<ul style="list-style-type: none"> • Ear exam • Hearing screen
6 years	<ul style="list-style-type: none"> • Parental concern 	<ul style="list-style-type: none"> • Ear exam • Hearing screen

7 years	<ul style="list-style-type: none"> • Parental and patient concern 	<ul style="list-style-type: none"> • Ear exam • Hearing screen (if not done at 6 years)
8 years	<ul style="list-style-type: none"> • Parental and patient concern 	<ul style="list-style-type: none"> • Ear exam • Hearing screen
9 years	<ul style="list-style-type: none"> • Parental and patient concern 	<ul style="list-style-type: none"> • Ear exam • Hearing screen (if not done at 8 years)
10 years	<ul style="list-style-type: none"> • Parental and patient concern. 	<ul style="list-style-type: none"> • Ear exam • Hearing screen
11 years	<ul style="list-style-type: none"> • Parental and patient concern. 	<ul style="list-style-type: none"> • Ear exam • Hearing screen (if not done at 10 years)
12 years	<ul style="list-style-type: none"> • Parental and patient concern. 	<ul style="list-style-type: none"> • Ear exam • Hearing screen
13 years	<ul style="list-style-type: none"> • Parental and patient concern 	<ul style="list-style-type: none"> • Ear exam • Hearing screen (if not done at 12 years)
14 years	<ul style="list-style-type: none"> • Parental and patient concern. 	<ul style="list-style-type: none"> • Ear exam • Hearing screen (if not done at 12 or 13 years)
15 years	<ul style="list-style-type: none"> • Parental and patient concern. 	<ul style="list-style-type: none"> • Ear exam • Hearing screen
16 years	<ul style="list-style-type: none"> • Parental and patient concern. 	<ul style="list-style-type: none"> • Ear exam • Hearing screen (if not done at 15 years)
17 years	<ul style="list-style-type: none"> • Parental and patient 	<ul style="list-style-type: none"> • Ear exam • Hearing screen (if not done at

	concern.	15, or 16 years)
18 years	<ul style="list-style-type: none"> • Parental and patient concern. 	<ul style="list-style-type: none"> • Ear exam • Hearing screen
19 years	<ul style="list-style-type: none"> • Parental and patient concern. 	<ul style="list-style-type: none"> • Ear exam
20 years	<ul style="list-style-type: none"> • Parental and patient concern. 	<ul style="list-style-type: none"> • Ear exam

References

Universal Newborn Hearing Screening, Diagnosis and Intervention Guidelines for Pediatric Medical Home Providers (Flow Chart) – AAP January 2003

Joint Committee on Infant Hearing Detection and intervention Programs: Year 2000 Position Statement.

www.medicalhomeinfo.org/screening/hearing.html

Recommendations of the EPSDT Screening Guidelines Committee

April, 2004

Vision Screenings

- Screening of visual problems is important during critical age interval to detect several potential problems. These include:
 - 1) Screening of extremely prematurely born infants for Retinopathy of Prematurity (ROP), especially those who have received oxygen therapy.
 - 2) Screening for congenital cataracts and retinoblastoma at birth and through age 18 months of age.
 - 3) Screening as early as possible time for amblyopia and refractive errors. Please refer to the chart (below) for screening intervals
- Acceptable methods for screening ocular alignment include: photoscreening (preferred), unilateral cover test at 10 feet or 3 M, Random Dot E Stereotest at 40 cm (630 secs of arc). Photoscreening is not a substitute for accurate visual acuity measurement but can provide significant information about the presence of sight-threatening conditions such as strabismus, anisometropia, high hyperopia, media opacities (cataract),.
- Photoscreening results are accurate only with proper interpretation.
- Simultaneous Red Reflex Test (Bruckner Test) can detect amblyogenic conditions, such as unequal refractive errors (unilateral high myopia, hyperopia, or astigmatism), but require skilled examiners.
- Acceptable methods for screening visual acuity include: Snellen Letters, Snellen Numbers, Tumbling E, HOTV, Picture Tests, Allen Figures, LH Symbols (LEA Symbols).
- Assessments of visual acuity should be performed with an eye patch or eye taped shut, or similar procedure, in order to ensure results,
- Eye exams should entail an anterior segment inspection. The AAP/AAO Policy Statement in **Pediatrics**, April, 2003, should serve as the standard.
- If there are parental concern about vision , at any age, then an objective screening test or diagnostic should be performed
- Positive screening results should lead to referral for diagnostic assessment of vision. A prompt re-screening may be substituted for immediate referral for diagnostic assessment if the clinician believes his initial screening result is likely to be a false positive. Re-screening should be done within 2-4 weeks rather than waiting until the next scheduled well child visit.
- Interperiodic screenings may also be conducted between recommended testing intervals.

	Recommendations for Vision Screening	
	<i>Subjective</i>	<i>Objective</i>
High Risk Prematurely Born Children; assessment to be performed by 33 weeks of gestational age or 6 weeks post-natal (whichever comes later)	N/A	<ul style="list-style-type: none"> If gestation is less than 28 weeks or weighing less than 1500 grams, child should be referred to a Pediatric Ophthalmologist for screening for Retinopathy of Prematurity (ROP) such that the first retina exam can occur by 33 weeks of gestational age or six weeks, post-natal .
Newborn		<ul style="list-style-type: none"> Eye exam: red reflex, corneal inspection. Eye exam should include the following elements: external inspection, examination of anterior segment, & red reflex

By 1 month	<ul style="list-style-type: none"> Parental concern about vision 	<ul style="list-style-type: none"> Eye exam: red reflex, corneal inspection Eye exam should include the following elements: external inspection, examination of anterior segment, & red reflex
2 months	<ul style="list-style-type: none"> Parental concern about vision 	<ul style="list-style-type: none"> Eye exam: red reflex, corneal inspection Eye exam should include the following elements: external inspection, ocular motility, examination of pupils, & red reflex Fixes on face, follows with eyes
4 months	<ul style="list-style-type: none"> Parental concern about vision 	<ul style="list-style-type: none"> Eye exam: red reflex Eye exam should include the following elements: external inspection, ocular motility, examination of pupils, & red reflex Fixes and follows each eye

	<i>Subjective</i>	<i>Objective</i>
6 months	<ul style="list-style-type: none"> Parental concern about vision 	<ul style="list-style-type: none"> Eye exam: red reflex Eye exam should include the following elements: external inspection, ocular alignment and motility, examination of pupils, & red reflex

		<ul style="list-style-type: none"> Fixes and follows each eye
9 months	<ul style="list-style-type: none"> Parental concern about vision 	<ul style="list-style-type: none"> Eye exam: red reflex Eye exam should include the following elements: external inspection, ocular motility and alignment, examination of pupils, & red reflex Fixes and follows each eye
12 months	<ul style="list-style-type: none"> Parental concern about vision 	<ul style="list-style-type: none"> Eye exam Fixes and follows each eye
15 months	<ul style="list-style-type: none"> Parental concern about vision Can see small objects 	<ul style="list-style-type: none"> Eye exam
	Recommendations for Vision Screening	
	<i>Subjective</i>	<i>Objective</i>
18 months	<ul style="list-style-type: none"> Parental concern about vision Can see small objects 	<ul style="list-style-type: none"> Eye exam
24 months	<ul style="list-style-type: none"> Parental concern about vision Can see small objects 	<ul style="list-style-type: none"> Eye exam. Ocular alignment, beginning at age 2 years. Children should have this screening done one time by age 6 if not performed at a prior age interval.

3 years	<ul style="list-style-type: none"> • Parental concern about vision • Can see small objects 	<ul style="list-style-type: none"> • Eye exam • Ocular alignment, beginning at age 2 years. Children should have this screening done one time by age 6 if not performed at a prior age interval. • Visual acuity (should be obtained as early as cooperation and valid results can be obtained.)
4 years	<ul style="list-style-type: none"> • Parental concern about vision 	<ul style="list-style-type: none"> • Eye exam. • Visual acuity if not done at 3 years. • Ocular alignment, beginning at age 2 years. Children should have this screening done one time by age 6 if not performed at a prior age interval.
5 years	<ul style="list-style-type: none"> • Parental concern about vision 	<ul style="list-style-type: none"> • Eye exam • Ocular alignment, beginning at age 2 years. Children should have this screening done one time by age 6 if not performed at a prior age interval. • Visual acuity (if not done at 3 or 4 years)
6 years	<ul style="list-style-type: none"> • Parental concern about vision 	<ul style="list-style-type: none"> • Eye exam • Visual acuity • Ocular alignment, beginning at age 2 years. Children should have this screening done one time by age 6 if not performed at a prior age interval.

7 years	<ul style="list-style-type: none"> • Parental and patient concern about vision 	<ul style="list-style-type: none"> • Eye exam • Visual acuity testing (if not done at 6 years)
8 years	<ul style="list-style-type: none"> • Parental and patient concern about vision 	<ul style="list-style-type: none"> • Eye exam • Visual acuity testing
9 years	<ul style="list-style-type: none"> • Parental and patient concern about vision 	<ul style="list-style-type: none"> • Eye exam • Visual acuity testing if not done at 8 years.
10 years	<ul style="list-style-type: none"> • Parental and patient concern about vision 	<ul style="list-style-type: none"> • Eye exam. • Visual acuity
11 years	<ul style="list-style-type: none"> • Parental and patient concern about vision 	<ul style="list-style-type: none"> • Eye exam. • Visual acuity (if not done at 10 years)
12 years	<ul style="list-style-type: none"> • Parental and patient concern about vision 	<ul style="list-style-type: none"> • Eye exam • Visual acuity
13 years	<ul style="list-style-type: none"> • Parental and patient concern about vision 	<ul style="list-style-type: none"> • Eye exam. • Visual acuity if not done at age 12.
14 years	<ul style="list-style-type: none"> • Parental and patient concern about vision 	<ul style="list-style-type: none"> • Eye exam • Visual acuity testing (if not done at 12 or 13)

15 years	<ul style="list-style-type: none"> • Parental and patient concern about vision 	<ul style="list-style-type: none"> • Eye exam • Visual acuity testing
16 years	<ul style="list-style-type: none"> • Parental and patient concern about vision 	<ul style="list-style-type: none"> • Eye exam • Visual acuity testing (if not done at 15 years)/should be done for purpose of ensuring drivers license
17 years	<ul style="list-style-type: none"> • Parental and patient concern about vision 	<ul style="list-style-type: none"> • Eye exam • Visual acuity (if not done at 15 or 16 years)
18 years	<ul style="list-style-type: none"> • Parental and patient concern about vision 	<ul style="list-style-type: none"> • Eye exam. • Visual acuity
19 years	<ul style="list-style-type: none"> • Parental and patient concern about vision 	<ul style="list-style-type: none"> • Eye exam • Visual acuity if not done at 18 years.
20 years	<ul style="list-style-type: none"> • Parental and patient concern about vision 	<ul style="list-style-type: none"> • Eye exam • Visual acuity if not done at 18 or 19 years.

References

Eye Examination in Infants, Children, and Young Adults by Pediatricians, Policy Statement, American Academy of Pediatrics, American Association of Certified Orthoptists, American Association for Pediatric Ophthalmology and Strabismus, American Academy of Ophthalmology, PEDIATRICS, Vol. 111, No. 4, April 2003.